

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin K. Johanson on 7/10/09.

The application has been amended as follows:

In the claims:

1. (Currently amended) A parallel plate plasma reactor, comprising:
first, second and third power generators wherein the first power generator is capacitively coupled to an upper electrode and the second and third power generators are capacitively coupled to a lower electrode for supporting a wafer thereon, the first, second and third power generators being frequency-based power generators; and
a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a plurality of phases of a duty cycle of a process, wherein at least one of the plurality of activation configurations includes differently activating the second and third power generators to generate at least two different active states on the lower electrode; wherein each of the second and third power generators are configured to independently receive a signal from the controller and independently apply energy directly to the lower electrode entirely to generate the at least two different active states thereon.

16. (Currently amended) A parallel plate plasma reactor, comprising:
a vacuum chamber including upper and lower electrodes therein;

first, second and third power generators wherein the first power generator is capacitively coupled to an upper electrode and the second and third power generators are capacitively coupled to a lower electrode for supporting a wafer thereon, the first, second and third power generators being frequency-based power generators; and

a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a plurality of phases of a duty cycle of a process, wherein at least one of the plurality of activation configurations includes differently activating the second and third power generators to generate at least two different active states on the lower electrode; wherein each of the second and third power generators are configured to independently receive a signal from the controller and independently apply energy directly to the lower electrode entirely to generate the at least two different active states thereon.

Allowable Subject Matter

Claims 1, 3-9, 11-23 are allowed.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Claims 1, 16 – Closest prior arts [(Chen et al – US PGPUB 2004/0025791), and (Suzuki – US Patent 6,756,311)] do not teach claim limitation "a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a plurality of phases of a duty cycle of a process, wherein at least one of the plurality of activation configurations includes differently activating the second and third power generators to generate at least two different active states on the lower electrode; wherein each of the second and third power generators are configured to independently receive a signal

from the controller and independently apply energy directly to the lower electrode entirely to generate the at least two different active states thereon" in the context of remaining limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAKESH K. DHINGRA whose telephone number is (571)272-5959. The examiner can normally be reached on 8:30 -6:00 (Monday - Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571)-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. K. D./
Examiner, Art Unit 1792

/Parviz Hassanzadeh/
Supervisory Patent Examiner, Art Unit 1792